

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: GUERIN-SCHMITT, Genevieve

SERIAL NO.: 10/525,355

ART UNIT: 3754

FILED: February 23, 2005

EXAMINER: Nichols II, R. K.

TITLE: TRANSMISSION DEVICE AND APPLICATION TO A METERING DEVICE

Amendment A: REMARKS

Upon entry of the present amendments, previous Claims 1 -10 have been canceled and new Claims 11 - 19 substituted therefor. Reconsideration of the rejections, in light of the foregoing amendments and present remarks, is respectfully requested. The present amendments have been entered for the purpose of more clearly distinguishing the present invention from the prior art and for the purpose of placing the claim language into a more proper U.S. format.

In the Office Action, Claims 1, 2 and 7 - 10 were rejected as being anticipated by the Dessureault patent. Claims 3 and 5 were rejected as being obvious over the Dessureault patent in view of the Richardson British patent. Claim 4 was rejected as being obvious over the Dessureault patent in view of the Richardson British patent and further in view of the Stieber German patent. Claim 6 was rejected as being obvious over the Dessureault patent in view of the Nihei patent. There was also a minor formality rejection with respect to the Abstract.

As an overview to the present reply, Applicant has revised the original claims in the form of new Claims 11 - 19. New independent Claim 11 expresses the limitations of previous independent Claim 1, along with the limitations of dependent Claim 3. The new claims have been expressed in a more proper U.S. format, including proper antecedent bases and proper structural interrelationships throughout. Any indefinite terminology found in the original claim language has been corrected herein. Dependent Claim 12 corresponds to the limitations of previous dependent Claim 2.

Dependent Claims 13 - 18 correspond, respectively, to the limitations of previous Claims 4 - 10. Each of the dependent claims has been expressed in a more proper U.S. format.

Relative to the prior art rejections, Applicant respectfully contends that new independent Claim 11 distinguishes the present invention from the prior art combination of the Dessureault patent and the Richardson British patent.

The Dessureault patent concerns a dosing device having a lever that is capable of oscillating around an axis to drive a ratchet wheel equipped with teeth. The ratchet wheel is co-axial to the rotational axis of the lever. The ratchet wheel 23 is driven so as to rotate in a first direction by a first ratchet 31 of the lever. A second ratchet 35 works together with the teeth of the wheel to inhibit any inverse rotation. The wheel 23 is integral with a coaxial pinion 17 which drives the rack 15 of a piston 11 in order to empty the content of a cartridge.

Applicant respectfully contends that the Dessureault patent is quite different than the present invention, as claimed by independent Claim 11. Independent Claim 11 now specifies that the wheel has a "smooth circumferential edge". In contrast, the Dessureault patent shows that the wheel 23 has teeth. In the present invention, the "driving means" and the "locking means" include respective first and second eccentrics. The first eccentric braces against the wheel when the actuator moves in the driving direction so as to drive the wheel in the first direction. The second eccentric braces against the wheel when the actuator moves in the return direction so as to prevent the wheel from rotating in the second direction. One of the first and second eccentrics is slidable freely along the smooth circumferential edge when the other of the eccentrics braces against the circumferential edge. This is quite different from the Dessureault patent which uses ratchets 31 and 35 that engage the teeth of the wheel.

The Richardson British patent concerns a mechanism that allows the transformation of an

oscillation movement into a rotational movement. As shown in Figure 1 of the Richardson British patent, there is a lever A capable of oscillating around a rotational axis B and a wheel B' with a smooth portion. The means for driving the wheel is fixed solidly to the lever A. This means for driving the wheel includes a ball a<sup>1</sup> that is constrained by a spring a<sup>6</sup> that follows the incline of a guide a<sup>3</sup> so as to make contact with the portion of the wheel. Blocking devices serve to inhibit the inverse rotation of the wheel. This blocking device includes a ball a<sup>5</sup> that is constrained by a spring a<sup>6</sup> that follows the incline of a guide a<sup>4</sup> so as to make contact with the part of the wheel. The balls a<sup>1</sup> and a<sup>5</sup> are capable of rolling in accordance with their respective guides a<sup>3</sup> and a<sup>4</sup>. These balls cannot be considered as "eccentrics" in the nature of the present invention. In effect, the balls a<sup>1</sup> and a<sup>5</sup> of the Richardson British patent do not provide rotational axes arranged such that the distance between the rotational axis of a the eccentric and the rotational axis of the wheel remains constant during the functioning of the device. Fundamentally, the balls cannot be considered as eccentrics in any way.

Applicant notes that some confusion could occur from the recitation found on page 2, column 1, line 16 of the Richardson British patent. This portion of the Richardson British patent mentions the presents of an eccentric. However, this is an eccentric which makes it possible to impose an oscillating movement to the lever A with the eccentric being fixed solidly to a rotating shaft of a motor. This is, in no way, an eccentric of the lever A that works together with the smooth circumferential edge of the wheel B'.

The combination of the Dessureault patent with the Richardson British patent does not "make obvious" the present invention as defined by independent Claim 11. The Richardson British patent does not show the use of eccentrics in the nature of the present invention which serve to drive and lock the wheel by a bracing effect upon the smooth circumferential edge of the wheel. The

Richardson British patent simply uses balls a<sup>1</sup> and a<sup>5</sup> that are capable of following along their guides a<sup>3</sup> and a<sup>5</sup>.

Based upon the foregoing analysis, Applicant contends that independent Claim 11 is patentably distinguishable from the prior art combination of the Dessureault patent and Richardson British patent. Applicant respectfully contends that one having ordinary skill in the art of the Dessureault patent would find it very difficult to combine any teachings of that are found in the Richardson British patent so as to create the present invention, as claimed by independent Claim 11. The present invention provides a novel, unique and non-obvious approach to the transformation of an oscillating movement into a unidirectional rotational movement. On this basis, Applicant respectfully contends that the present invention, as defined by independent Claim 11, is patentably distinguishable from the prior art.

Based upon the foregoing analysis, Applicant contends that independent Claim 11 is now in proper condition for allowance. Additionally, those claims which are dependent upon independent Claim 11 should also be in condition for allowance. Reconsideration of the rejections and allowance of the claims at an early date is earnestly solicited. Since no new claims have been added above those originally paid for, no additional fee is required.

Respectfully submitted,

January 28, 2009  
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Date

Customer No. 24106

/Andrew W. Chu/  
\_\_\_\_\_  
John S. Egbert; Reg. No. 30,627  
Andrew W. Chu; Reg. No. 46,625  
Egbert Law Offices PLLC  
412 Main Street, 7th Floor  
Houston, Texas 77002  
(713)224-8080  
(713)223-4873 fax